

providing all the pending claims, as they now stand,  
incorporating the changes indicated below.

Please cancel claims 1-6 and 8-29.

Rewrite claim 7 as follows:

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1     ~~17~~. (Amended) [The method of claim 5] A method of  
2     processing and storing data in a computer system including  
3     processor circuitry, and a data storage device, the method  
4     comprising the steps of:  
5             storing first and second sets of records in  
6     separate first-in, first-out data structures, respectively,  
7     on the data storage device, the first and second sets of  
8     records being of different data resolutions and  
9     corresponding to overlapping periods of time;  
10            operating the processor circuitry to receive data  
11     collected over a period of time; and  
12            operating the processor circuitry to update at  
13     least one record in each of the stored first and second  
14     sets of records with the received data such that a previous  
15     record included in each of the first and second data  
16     structures is replaced;  
17            periodically collecting network traffic data, wherein  
18     the collected network traffic data includes byte and packet  
19     count information associated with each of a plurality of  
20     monitored conversations between devices included in the  
21     computer system;  
22            storing the collected network traffic data in a  
23     buffer; and

24 operating the processor circuitry to retrieve network  
25 traffic data from the buffer, the retrieved network traffic  
26 data being received by the processor circuitry;

27 [ , ] wherein the step of operating the processor  
28 circuitry to update at least one record in each of the  
29 stored first and second sets of records [including]  
30 includes the steps of:

31 updating a record corresponding to a first  
32 conversation in the first set of records; and

33 updating a record corresponding to the first  
34 conversation in the second set of records. --.

Please add the following new claims:

1 ~~30.~~ The method of claim ~~7~~, further comprising the  
2 step of:

3 allocating fixed amounts of storage space on the  
4 data storage device for storing each one of the first and  
5 second first-in, first-out data structures used to store  
6 the first and second sets of records.

1 ~~31.~~ The method of claim ~~7~~, wherein the first set of  
2 records include hourly records and the second set of  
3 records includes daily records.

1 ~~32.~~ The method of claim ~~7~~,  
2 wherein the network traffic data stored in the  
3 buffer includes time stamp information indicating the  
4 period of time in which the network traffic data was  
5 collected; and

6 wherein the step of operating the processor  
7 circuitry to update at least one record in each of the  
8 stored first and second sets of records includes the step  
9 of:

10 examining at least one time stamp included in the  
11 buffered network traffic data.

5  
1 ~~33.~~ The method of claim ~~1~~,

2 wherein the processor circuitry includes first  
3 and second central processing units, and

4 wherein the step of operating the processor  
5 circuitry to update at least one record in each of the  
6 stored first and second sets of records includes the step  
7 of operating the first processor to update the first set of  
8 records while operating the second processor to update the  
9 second set of records.

6  
1 ~~34.~~ The method of claim ~~1~~, wherein the computer system  
2 further includes a display device, the method further  
3 comprising the step of:

4 displaying data corresponding to overlapping  
5 periods of time at different resolutions on the display  
6 device.

1  
1 ~~35.~~ A computer system for monitoring network traffic data  
2 comprising:

3 a memory;  
4 a data storage device; and  
5 a processor to execute instructions stored in the  
6 memory,

7 wherein the memory stores:

8 instructions to store first and second sets  
9 of records in separate first-in, first-out data structures,  
10 respectively, on the data storage device, the first and  
11 second sets of records being of different data resolutions  
12 and corresponding to overlapping periods of time;

13 instructions to receive data collected over  
14 a period of time;

15 instructions to update at least one record  
16 in each of the stored first and second sets of records with  
17 the received data such that a previous record included in  
18 each of the first and second data structures is replaced;

19 instructions to periodically collect network  
20 traffic data, wherein the collected network traffic data  
21 includes byte and packet count information associated with  
22 each of a plurality of monitored conversations between  
23 devices included in the computer system;

24 instructions to store the collected network  
25 traffic data in a buffer; and

26 instructions to retrieve network traffic  
27 data from the buffer, the retrieved network traffic data  
28 being received by the processor;

29 wherein the instructions to update at least one record  
30 in each of the stored first and second sets of records  
31 include instructions to:

32 update a record corresponding to a first  
33 conversation in the first set of records; and

34 update a record corresponding to the first  
35 conversation in the second set of records.

8 1  
36. The computer system of claim 35, wherein the memory  
2 further comprises instructions to:

3 allocate fixed amounts of storage space on the  
4 data storage device for storing each one of the first and  
5 second first-in, first-out data structures used to store  
6 the first and second sets of records.

9  
37. The computer system of claim 35, wherein the first set  
of records include hourly records and the second set of  
records includes daily records.

10  
38. The computer system of claim 35,  
wherein the network traffic data stored in the  
buffer includes time stamp information indicating the  
period of time in which the network traffic data was  
collected; and

wherein the instructions to update at least one  
record in each of the stored first and second sets of  
records include instructions to:

examine at least one time stamp included in the  
buffered network traffic data.

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39. The computer system of claim 35,

wherein the processor includes first and second  
central processing units, and

wherein the instructions to operate the processor  
to update at least one record in each of the stored first  
and second sets of records includes instructions to operate  
the first processor to update the first set of records  
while operating the second processor to update the second  
set of records.

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1 ~~40.~~ The computer system of claim ~~35~~ further including a  
2 display device, the memory further comprising instructions  
3 to:  
4 display data corresponding to overlapping periods  
5 of time at different resolutions on the display device.

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1 ~~41.~~ A computer program product system for monitoring  
2 network traffic data, said computer program product  
3 comprising a computer usable medium having computer  
4 readable program code means embodied in said medium for  
5 causing a processor in a computer to:  
6 store first and second sets of records in separate  
7 first-in, first-out data structures, respectively, on a  
8 data storage device, the first and second sets of records  
9 being of different data resolutions and corresponding to  
10 overlapping periods of time;  
11 receive data collected over a period of time;  
12 update at least one record in each of the stored first  
13 and second sets of records with the received data such that  
14 a previous record included in each of the first and second  
15 data structures is replaced;  
16 periodically collect network traffic data, wherein the  
17 collected network traffic data includes byte and packet  
18 count information associated with each of a plurality of  
19 monitored conversations between devices included in the  
20 computer system;  
21 store the collected network traffic data in a buffer;  
22 and  
23 retrieve network traffic data from the buffer, the  
24 retrieved network traffic data being received by the  
25 processor;

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1 wherein the causing the processor to update at least  
2 one record in each of the stored first and second sets of  
3 records includes:

4 updating a record corresponding to a first  
5 conversation in the first set of records; and

6 updating a record corresponding to the first  
7 conversation in the second set of records.

1 <sup>14</sup>~~42~~. The computer program product of claim <sup>13</sup>~~41~~, wherein the  
2 computer readable program code means further causes the  
3 processor to:

4 allocate fixed amounts of storage space on the  
5 data storage device for storing each one of the first and  
6 second first-in, first-out data structures used to store  
7 the first and second sets of records.

1 <sup>15</sup>~~43~~. The computer program product of claim <sup>13</sup>~~41~~, wherein the  
2 first set of records include hourly records and the second  
3 set of records includes daily records.

1 <sup>16</sup>~~44~~. The computer program product of claim <sup>13</sup>~~41~~,

2 wherein the network traffic data stored in the  
3 buffer includes time stamp information indicating the  
4 period of time in which the network traffic data was  
5 collected; and

6 wherein the computer readable program code means  
7 to update at least one record in each of the stored first  
8 and second sets of records includes computer readable  
9 program code means to examine at least one time stamp  
10 included in the buffered network traffic data.